

### **REMARKS/ARGUMENTS**

These remarks are made in response to the Office Action of September 12, 2007 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 50-0951.

As an initial matter, Applicants thank the Examiner for explicitly noting the withdrawal of the previously asserted rejections under 35 U.S.C. § 112, second paragraph, based upon Applicants' earlier-submitted amendments.

In the Office Action, however, Claims 1-7, 10-16, and 18-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,314,361 to Yu, *et al.* (hereinafter Yu) in view of a newly-recited reference, U.S. Published Patent Application 2004/0111197 to Kipersztok, *et al.* (hereinafter Kipersztok). Additionally, Claims 1-7, 10-16, and 18-24 were rejected under 35 U.S.C. § 112, second paragraph.

Although Applicants respectfully disagree with the rejections, Applicants nevertheless have amended certain claims and cancelled certain other claims so as to expedite prosecution of the present application. Applicants respectfully note, however, that neither the amendments nor cancellation of claims are intended as, and should not be interpreted as, the surrender of any subject matter. Accordingly, Applicants respectfully reserve the right to present the original version of any of the amended claims in any future divisional or continuation applications from the present application.

In particular, Applicants have amended independent Claims 1, 10, and 18 have been amended to further emphasize certain aspects of the invention. Applicants have cancelled dependent Claims 2, 11, and 19. The claim amendments also address the issues raised under 35 U.S.C. § 112, second paragraph.

The claim amendments are fully supported throughout the Specification. (See, e.g., Specification, paragraphs [0019], [0027], and [0031].) No new matter has been introduced by the claim amendments.

**Applicants' Claims Define Over The References**

As already noted, independent Claims 1, 10, and 18 were each rejected as being unpatentable over Yu in view of the newly-cited reference, Kipersztok. Yu is directed to an automated system for reassigning, rescheduling, and rerouting aircraft in response to operational disruptions. (See, e.g., Yu, Col. 4, lines 33-44.) Kipersztok is merely cited as teaching the presentment of data in different visual formats, as noted at page 4 of the Office Action.

It is maintained in the Office Action that Yu discloses an optimization engine that includes revenue for specific flights, as well as associated costs, and that Yu further discloses that the optimization engine presents to a user "a list of substitute aircraft" as well as a solution to "aircraft reassignments."

In response, however, Applicants respectfully reiterate their earlier argument, namely, that merely describing certain inputs to an optimization engine is not equivalent to disclosing the manner in which those inputs are used to arrive at a particular solution.

In one portion cited in the Office Action, Yu describes generally the nature of the data utilized by an optimization engine:

"More specifically, the Aircraft Optimization Engine requires data consisting of flight, station, aircraft, fleet, subfleet, and cost information. In particular, the flight data includes the scheduled departure and arrival times, the origin and destination stations, the assigned aircraft, the quantity of passengers, and the revenue for each specific flight. Stations contain the

location, operating hours, and gate quantities for each station. Aircraft contain fleet and subfleet designations, seat capacities, and scheduled maintenance services for every aircraft. Fleets contain operational characteristics. Subfleets contain fleet designations and additional operational characteristics. The necessary cost information includes the cost corresponding to operating, delaying, canceling, and otherwise modifying flights and aircraft routes. In addition to this data, there exist associations amongst the data that are important for the engine to solve problems. In particular, the sequence of flights in a route must be associated with an aircraft in order for an aircraft to possess a route. Other important associations are those that permit or restrict operations; these include the fleets and subfleets that may operate at a station, fleets that may operate between station pairs, and the substitutability of one fleet/subfleet for another. In general, all the data that describes the flight schedule, aircraft routes, cost factors, and any operational restrictions must be available to the solution engine. When a problem is defined, additional scenario data such as the identification of grounded aircraft, the grounding period for each grounded aircraft, the recovery period for the scenario, the ferry creation indicator, the identification of protected aircraft and flights, the maximum allowable flight delay length, and any other restrictions on solutions must be provided. Given this data, the engine is then capable of solving the irregular operations aircraft routing problem. (Yu, Col. 8, lines 18-50.) (Emphasis supplied.)

Applicants respectfully maintain that in mentioning as one type of input among a wide and variable list of inputs used for "solving the irregular operations aircraft routing

problem," Yu yet fails to disclose the details regarding how the data is used to arrive at a particular solution. Specifically, it does not disclose how financial data – either costs or revenues – are factored in to solve a specific problem.

In another portion cited, Yu describes aircraft reassignments: "Based upon the above information a solution comprised of flight delays and cancellations, Ferry Flight creations, as well as aircraft reassignments is produced within the following operations constraints . . . ." (Yu, Col. 9, lines 29-30.) And in yet another portion, cited in the Office Action as teaching flight cancellations based upon financial data, Yu merely provides for a sequential step process of un-canceling and canceling flights subject to generally-stated constraints: "If at logic step 65 it is established that all uncancel sequences have been generated, the logic flow process proceeds from logic step 65 to logic step 66 to generate a flight sequence for cancellation from the Grounded Aircraft Route." (Yu, Col. 11, lines 51-55.)

Applicants respectfully renew their previously asserted argument that Yu describes financial data as one input, but does not specifically state the manner in which such data would be used. In particular Yu does not disclose how such data is used to select a particular flight for cancellation from among a set of alternative flight cancellation candidates. More fundamentally, Yu speaks generally to solving "irregular operations aircraft routing problems," but not specifically to a process for selecting a particular flight for cancellation from among a set of alternative flight cancellation candidates, a result obtained with the features recited in independent Claims 1, 10, and 18.

Yu does not even address as one of the "irregular" problems selecting a particular flight for cancellation from among a set of alternative flight cancellation candidates. Yu, even though mentioning aircraft rescheduling and financial inputs, does not teach or

suggest the precise steps recited in Claims 1, 10, and 18 for selecting a particular flight to cancel.

Yu does not teach or suggest, for example, presenting for each of a plurality of flight cancellation candidates corresponding amounts of revenue lost, determined based upon the financial data, for each flight cancellation candidate. No such comparative analysis is provided by Yu. Even more fundamentally, Yu does not select from among the plurality of flight cancellation candidates according to the following procedure:

selecting from among at least two flight cancellation candidates a flight cancellation candidate and canceling the flight corresponding to the selected flight cancellation candidate if the amount of revenue lost by canceling the corresponding flight is less than the revenue lost by canceling any other flight corresponding to a non-selected flight cancellation candidate,

as expressly recited in Claims 1, 10, and 18.

Additionally, Applicants note that Yu's broad reference to costs and revenues does not touch on every aspect that is considered in selecting a particular flight for cancellation from among a set of alternative flight cancellation candidates according to the recited features in the claims. For example, Yu does not generate a solution by considering revenue to include values for time-critical cargo and coupons held by passengers assigned to each flight corresponding to the particular flight cancellation candidate.

Accordingly, Applicants respectfully submit that Yu, alone or in combination with Kipersztok, fails to teach or suggest every feature recited in independent Claims 1, 10, and 18. Applicants therefore respectfully submit that Claims 1, 10, and 18 define over the prior art. Applicants further respectfully submit that, whereas each of the remaining

claims depends from Claim 1, 10, or 18 while reciting additional features, each of the dependent claims likewise defines over the prior art.

### **CONCLUSION**

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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Date: November 13, 2007

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